Claims

1. A valve for controlling a connection in a high-pressure fluid system, in particular in a fuel injection apparatus for an internal combustion engine, having a valve member (72) that is guided so that it is able to slide in the direction of its longitudinal axis (73), protrudes into a valve pressure chamber (77) in which high pressure prevails at least some of the time, and, in the valve pressure chamber (77), has a sealing surface (81) at an end extending transversely in relation to its longitudinal axis (73), with which sealing surface (81) the valve member (72) cooperates with a valve seat (79) extending transversely in relation to its longitudinal axis (73) in order, at least to a large extent, to close an opening (78) encompassed by the valve seat (79) in relation to the valve pressure chamber (77), which opening (78) is adjoined by a connection (64) leading to a low-pressure region, characterized in that the valve member (72) has a pin (83) that protrudes into the connection (64) and, when the sealing surface (81) of the valve member (72) is lifted away from the valve seat (79), this pin (83) conveys fluid flowing out of the valve pressure chamber (77) in such a way that the outgoing fluid exerts at least approximately no resulting force or only a slight resulting force on the valve member (72) in the direction of the longitudinal axis (73).

2. The valve according to claim 1, characterized in that the pin (83) initially deflects fluid flowing out of the valve pressure chamber (77) in such a way that it flows along the valve member (72) into the connection (64) at least approximately in the direction of the longitudinal axis (73) of the valve member (72).

3. The valve according to claim 2, characterized in that the pin (83) then deflects the outgoing fluid so that it flows away from the longitudinal axis (73) of the valve member (72) at an angle γ in relation to this longitudinal axis (73).

4. The valve according to one of claims 1 through 3, characterized in that the pin (83) has a circumferential annular groove (85) for flow deflection, which extends in the direction of the longitudinal axis (73) of the valve member (72), at least approximately to the level of the sealing surface (81) of the valve member (72).

5. The valve according to one of the preceding claims, characterized in that the valve seat (79) and/or the sealing surface (81) on the valve member (72) is embodied so that the distance between the sealing surface (81) and the valve seat (79), starting from the outer edge of the valve member (72), first decreases as it extends radially inward toward the longitudinal axis (73) of the valve member (72) and then increases again as it continues to extend radially inward.

6. The valve according to claim 5, characterized in that the sealing surface (81) of the valve member (72) is embodied as at least approximately planar.

7. The valve according to claim 5, characterized in that the valve seat (79) is embodied as at least approximately planar.